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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09:623,377	09/01/2000	Keizo Ukita	10936-52	2746

24256 7590 03/11/2003  
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CINCINNATI, OH 45202

EXAMINER
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MEDLEY, MARGARET B

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 03/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/623,377

Applicant(s)

UK,ITA ET AL

Examiner

Margaret B Medley

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6,8-12,15-20 and 22-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6,8-12,15-20 and 22-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other \_\_\_\_\_

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### DETAILED ACTION

This action is in response to Paper No. 7 dated December 2, 2002 wherein applicants canceled claims 7, 13, 14 and 21. The pending claims of record are claims 1-6, 8-12, 15-20 and 22-25.

The previous 102 (b) and 103 (a) art rejections made of record are withdrawn in view of applicants' amendments to claims 1, 8 and 15 and cancellation of claims 7, 13-14 and 21.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 8-12 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over (DIAL) JP-4,189,810 A in view of Mine 5,856,562.

DIAL teaches polymerization inhibitors for methacrylate compositions consisting of molecular oxygen-containing gases and at least one compound selected from the group (A) that includes N,N-diethylhydroxylamine and (B) selected from phosphoric acid and derivatives that include the phosphoric acid and derivatives of instant of instant claims 8-12 and 23-25, the translated English abstract. It is the examiner's position that when the (A) polymerization inhibitor component of DIAL is selected as being N,N-diethylhydroxylamine the instant claims are rendered obvious. The examiner take the position that the (a) and (b) component of DIAL are used in 1:1 ratio and therefore rendered obvious the instant claimed ratio of 1:10 to 100:1 since the 1-1 ratio is present within the said instant claimed range.

With respect to instant claims 11-12 the examiner takes the position that the N-oxyl compound is known as an inhibitor for inhibiting polymerization of ethylenically unsaturated monomers including methacrylate esters, abstract. It is the examiner's position that would be obvious to the artisan to use the N-oxyl compound and its hydroxyl derivatives as an inhibitor with reasonable expectation for inhibiting polymerization. The skilled artisan in the art with N-oxyl compound in hand would be able to arrived at the hydroxyl derivative of the N-oxyl compound.

Claims 1-6, 15-20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over DIAL JP- 4,189,810 A in view of Mine 5,856,562 as applied to claims 8-12 and 23-25 above, and further in view of DIAL) JP-4,189,810 A in view of Mine 5,856,562 and Albert et al (Albert) 3,371,124.

Applicants further teach a method for inhibiting polymerization-inhibiting composition comprising a conjugated diene and a composition thereof wherein DIAL and Mine are silent to teaching to a conjugated diene.

DIAL teaches polymerization inhibitors for methacrylate compositions consisting of molecular oxygen-containing gases and at least one compound selected from the group (A) that includes N,N-diethylhydroxylamine and (B) selected from phosphoric acid and derivatives that include the phosphoric acid and derivatives of instant of instant claims 1-3, 6, 15-17 and 20-22, the translated English abstract.

Albert teaches that inhibition of the undesirable polymerization of olefinic monomers which give rise to popcorn polymers by the use of a mixture of N, N alkylhydroxylamine and its bisoxalate salt as a popcorn polymer inhibitor in processes relating to the preparation of synthetic rubber (butadiene-based polymer latex), abstract and column 4 lines 13-15. Patent further teaches that the inhibitor may be used generally to prevent popcorn polymers in the preparation of polymers and copolymers such as those obtained from ethylenically unsaturated monomers. For homopolymers, the unsaturated monomer will be a conjugated diolefin. The useful conjugated diolefins are exemplified by butadienes, column 3 lines 69-75. The copolymers include styrene, methacrylates, etc., column 4 lines 3-12. Albert provides the motivation and that the polymerization inhibitors of DIAL would provide its polymerization inhibition properties to the conjugated diolefin as to its methacrylate since both of the polymers have ethylenically unsaturated monomers.

It is the examiner's position that when the (A) polymerization inhibitor component of DIAL is selected as being N,N-diethylhydroxylamine the instant claims are rendered obvious with the teaching of Albert to use methacrylates and conjugated diolefins with the inhibitors. The examiner take the position that the (a) and (b) component of DIAL are used in 1:1 ratio and therefore rendered obvious the instant claimed ratio of 1:10 to 100:1 since the 1-1 ratio is present within the said instant claimed range.

With respect to instant claims 4-5 and 18-19 the examiner takes the position that the N-oxyl compound of Mine is known as an inhibitor for inhibiting polymerization of ethylenically unsaturated monomers including methacrylate esters, abstract. It is the examiner's position that would be obvious to the artisan to use the N-oxyl compound and its hydroxyl derivatives as an inhibitor with reasonable expectation for inhibiting polymerization. The skilled artisan in the art with N-oxyl compound in hand would be able to arrived at the hydroxyl derivative of the N-oxyl compound.

The relied on prior art used in the above art rejections of record was previously made of record.

Applicant's arguments with respect to claims 1-6, 8-12, 15-20 and 22-25 have been considered but are moot in view of the new ground(s) of rejection.

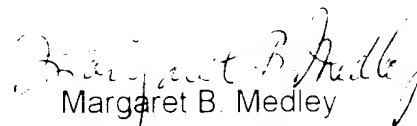
In an interview held on March 4, 2003 with applicants' representative an agreement was not reached to amend the claims to limit the (b) component to hexaalkylphosphorous triamides to place the claims in condition for allowance.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Margaret B. Medley whose telephone number is 703-308-2518. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 703-306-2777. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

  
Margaret B. Medley  
Primary Examiner  
Art Unit 1714

Margaret B. Medley  
March 7, 2003